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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,683	06/24/2005	Ole Klemmt Andersen	NL 021497	8987
24737 7590 11/25/2008 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510				
EXAMINER				
FISCHER, MARK L				
ART UNIT		PAPER NUMBER		
2627				
MAIL DATE		DELIVERY MODE		
11/25/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/540,683

Applicant(s)

ANDERSEN ET AL.

Examiner

MARK FISCHER

Art Unit

2627

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2005 and 30 September 2008 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. In response to the Amendment filed on September 30, 2008. Claim 1 is currently amended, and Claims 2-6 are as previously presented.

Drawings

2. The amendment filed September 30, 2008 including the filing of replacement sheets of drawings is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: Fig. 2 of the replacement sheets shows a plate 102 which is positioned between the servo-lens 40 and the servo-detector 42, which was not previously disclosed in the original disclosure.

Applicant is required to cancel the new matter in the reply to this Office Action.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the diffractive structure attached to a separate plate (as per claim 4) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing

should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. It is suggested that the new title indicates the measurement of tilt.
5. The abstract of the disclosure is objected to because it exceeds the 150 word limit. Correction is required. See MPEP § 608.01(b).
6. The substitute specification filed September 30, 2008 has not been entered because it does not conform to 37 CFR 1.125(b) and (c) because: It introduces new matter into the invention.
7. The substitute specification filed September 30, 2008 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added

material which is not supported by the original disclosure is as follows: “the diffractive structure 100 is mounted on *a plate 102 which is positioned between the servo-lens 40 and the servo-detector 42*” (emphasis added) (Page 16, lines 21-23) and Fig. 2 shows a plate 102 which is positioned between the servo-lens 40 and the servo-detector 42, which was not previously disclosed in the specification.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1, 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirai et al. (US Pat. No. 6,545,958 B1) in view of Tajiri et al. (US Pat. No. 6,072,607).

Regarding claim 1, Hirai et al. discloses an optical disc drive comprising rotating means (Col. 19, line 44), defining a rotating axis for an optical disc, and optical scanning means (Fig. 10), for scanning the optical disc with a light beam, the optical scanning means themselves comprising at least: a first light source (Fig. 10, element 1a), for producing a first light beam; focusing means (5) for focusing the first light beam, the focusing means being provided between the first light source (1a) and a focusing point on an information layer on the optical disc (6); an optical detector (8) for receiving a first backward beam reflected from the information layer of the optical disc; a second light source (1b) for producing a second light beam, the second light beam also being transmitted to the focusing means (5), the second light beam forming, on the optical detector (8), a second spot corresponding to a second backward beam obtained after reflection of the second light beam on the information layer of the optical disc (6), a position of the second spot on the optical detector being used to measure tilt (Col. 17, lines 44-46 and Fig. 5B shows a position on the detector). Hirai et al. does not explicitly disclose a diffractive structure arranged between the focusing point and the optical detector, the diffractive structure having diffracting elements for substantially refocusing the second backward beam onto the optical detector. However, Tajiri et al. discloses (Fig. 1) the use of a diffractive structure (top surface of element 7) arranged between a focusing point and an optical detector (5), the

diffractive structure having diffracting elements for substantially refocusing a backward beam onto the optical detector (beam is focused on element 5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hirai et al. with Tajiri et al. with the motivation to be able to redirect the second light beam, using the diffractive structure, to be focused onto the optical detector.

Regarding claim 2, Tajiri et al. discloses (Fig. 1) that the diffractive structure is attached to one surface of a servo-lens (i.e. element 7 is a lens with a diffractive structure) positioned just before the optical detector.

Regarding claim 4, Tajiri et al. discloses (Fig. 1) that the diffractive structure is attached to a separate plate (7).

12. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirai et al. (US Pat. No. 6,545,958 B1) in view of Tajiri et al. (US Pat. No. 6,072,607) further in view of Sano et al. (US Pat. No. 6,327,110 B1).

Regarding claim 3, Hirai et al. in view of Tajiri et al. does not explicitly disclose that the diffractive structure is attached to one surface of an objective lens used as focusing means. However, Sano et al. discloses (Fig. 1) that a diffractive structure (112) can be attached to one surface of an objective lens (110) used as a focusing means. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hirai et al. in view of Tajiri et al. with Sano et al. with the motivation to create a more compact device by integrating the diffraction structure and objective lens, as disclosed by Tajiri et al., together as a single element, as disclosed by Sano et al.

13. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirai et al. (US Pat. No. 6,545,958 B1) in view of Tajiri et al. (US Pat. No. 6,072,607) further in view of Hendriks et al. (US Pub. No. 2002/0118427 A1).

Regarding claim 5, Hirai et al. in view of Tajiri et al. does not explicitly disclose that the diffractive structure consists of a series of ring-shaped prisms. However, Hendriks et al. discloses that a diffractive structure may consist of a series of ring-shaped prisms (see Fig. 2b). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hirai et al. in view of Tajiri et al. with Hendriks et al. with the motivation to use a well-known type of diffractive structure that has been previously used in optical apparatuses.

Regarding claim 6, Hirai et al. in view of Tajiri et al. does not explicitly disclose that the diffractive structure is approximated by a step-wise structure. However, Hendriks et al. discloses that a diffractive structure may be approximated by a step-wise structure (see Fig. 3b). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hirai et al. in view of Tajiri et al. with Hendriks et al. with the motivation to use a well-known type of diffractive structure that has been previously used in optical apparatuses.

Response to Arguments

14. Applicant's replacement drawing sheets have not been accepted because they introduce new matter (Fig. 2 shows a plate 102 which is positioned between the servo-lens 40 and the

servo-detector 42, which was not previously disclosed in the specification). The objection to the drawings has not been withdrawn.

15. Applicant's submission of a substitute specification has not been entered because the substitute specification contains new matter.

16. The objection to claim 1 has been withdrawn due to the amendment of claim 1.

17. Applicant's arguments with respect to the rejection of claims 1-6 under 35 U.S.C. 103(a) has been considered and is persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Tajiri et al. (US Pat. No. 6,072,607).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARK FISCHER whose telephone number is (571) 270-3549. The examiner can normally be reached on Monday-Friday from 9:00AM to 6:30PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Fischer/
Examiner, Art Unit 2627
11/19/2008
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